WHAT IS CLAIMED IS:

1. A photoelectric converter having a photoelectric converting section on an insulating substrate, the photoelectric converting section comprising:

a first electrode layer;

an insulating layer for inhibiting both types of carriers, a first type of carriers and a second type of carriers having positive or negative characteristics opposite to those of the first type of carriers, from passing through the layer;

a photoelectric converting semiconductor layer;

an injection blocking layer for inhibiting the first type of carriers from being injected to the semiconductor layer; and

a second electrode layer.

2. A photoelectric converter according to claim 1, further comprising:

a power-supply section for applying an electric field to each layer of said photoelectric converting section in a direction so that said first type of carriers are introduced from said semiconductor layer to said second electrode layer in a refresh mode or in a direction so that said first type of carriers generated by light incident on said semiconductor layer are remained in said semiconductor layer and said

second type of carriers are introduced to said second electrode layer in a photoelectric conversion mode; and

a detecting section for detecting said first type of carriers stored in said semiconductor layer or said second type of carriers introduced to said second electrode layer in the photoelectric conversion mode.

3. A photoelectric converter according to claim 1, wherein at least one of said first and second electrodes has a transparent layer.

4. A photoelectric converter according to claim 1, wherein said semiconductor layer contains hydrogenated amorphous-silicon.

5. A photoelectric converter according to claim 1, wherein said injection blocking layer is a semiconductor formed by doping an n-type or p-type chemical element therein.

6. A photoelectric converter according to claim 1, wherein said injection blocking layer is a barrier layer generated by a difference in work function between said second electrode layer and said semiconductor layer.

7. A photoelectric converter according to claim

1, further comprising a switching element on the substrate.

8. A photoelectric converter according to claim 7, wherein said switching element is a capacitor having a gate electrode, a second insulating layer, a second semiconductor layer and first and second main electrode layers, the first and second main electrode layers being provided in said second semiconductor layer so as to be spaced through an ohmic contact layer.

9. A photoelectric converter according to claim 8, wherein said gate electrode, said second insulating layer, said second semiconductor layer, said ohmic contact layer and said first and second main electrode layers of said switching element are respectively common-layers with said first electrode layer, said insulating layer, said semiconductor layer, said injection blocking layer and said second electrode layer of said photoelectric converting section.

10. A photoelectric converter according to claim 8, wherein said second semiconductor layer contains hydrogenated amorphous-silicon.

11. A photoelectric converter according to claim 7, further comprising a capacitive element.

12. A photoelectric converter according to claim 11, wherein said capacitive element has a third electrode layer, a fourth electrode layer and a third insulating layer provided between the third and fourth electrode layers.

13. A photoelectric converter according to claim 8, further comprising a capacitive element having a third electrode layer, a fourth electrode layer and a third insulating layer provided between the third and fourth electrode layers.

14. A photoelectric converter according to claim 11, wherein said capacitive element stores electric signals based on optical information photoelectrically converted in said photoelectric converting section.

15. A photoelectric converter according to claim 11, wherein said third electrode layer, said third insulating layer and said fourth electrode layer of said capacitive element are respectively common-layers with said first electrode layer, said insulating layer and said second electrode layer of said photoelectric converting section.

16. A photoelectric converter according to claim 13, wherein said third electrode layer, said third

insulating layer and said fourth electrode layer of said capacitive element are respectively common-layers with said first electrode layer, said insulating layer and said second electrode layer of said photoelectric converting section.

17. A photoelectric converter according to claim 1, further comprising a plurality of said photoelectric converting sections.

18. A photoelectric converter according to claim 17, wherein said photoelectric converting sections are arranged one-dimensionally or two-dimensionally.

19. A photoelectric converter according to claim 17, wherein said photoelectric converting sections respectively have switching elements.

20. A photoelectric converter according to claim 19, wherein said photoelectric converting sections are connected commonly in desired numbers and divided into a plurality of blocks so that said switching element is operable every block.

21. A photoelectric converter according to claim 20, further comprising a matrix signal line for outputting signals from a plurality of photoelectric

converting elements divided into said plurality of blocks.

22. A photoelectric converter according to claim 21, wherein said matrix signal line has a fifth electrode layer, a sixth electrode layer and a middle layer at an intersection of two lines of said matrix signal line, the middle layer being provided between said fifth electrode layer and said sixth electrode layer.

23. A photoelectric converter according to claim 22, wherein said middle layer has a fourth insulating layer.

24. A photoelectric converter according to claim 22, wherein said middle layer has a fourth insulating layer and said fifth electrode layer, said fourth insulating layer and said sixth electrode layer are respectively common-layers with said first electrode layer, said insulating layer and said second electrode layer of said photoelectric converting section.

25. A photoelectric converter according to claim 1, further comprising a refresh means for applying a pulse voltage through a pulse-applying capacitive element to apply an electric field to said

photoelectric converting section.

26. A photoelectric converter according to claim 25, wherein the layer structure of said pulse-applying capacitive element is the same as that of said photoelectric converting section.

27. A system having a photoelectric converter comprising:

a plurality of photoelectric converting sections formed on a substrate, each of the photoelectric converting sections including a first electrode layer and a second electrode layer, an insulating layer formed between the first and second electrode layers for inhibiting a first type of carriers and a second type of carriers not identical with the first type of carriers from passing through the layer, a semiconductor layer, and an injection blocking layer for inhibiting said first type of carriers from being injected into the semiconductor layer; and

a signal processing means for processing signals output from the photoelectric converting sections.

28. A system according to claim 27, further comprising a record means for recording signals output from said signal processing means.

29. A system according to claim 27, further comprising a display means for displaying signals output from said signal processing means.

30. A system according to claim 27, further comprising a transmission means for transmitting signals output from said signal processing means.

31. A system according to claim 27, wherein said photoelectric converter has a phosphor.

32. A system according to claim 27, further comprising a light source for emitting light to generate optical information input to said photoelectric converter.

33. A system according to claim 32, wherein said light source emits X-rays.

34. A method of driving a photoelectric converting section formed on a substrate, the photoelectric converting section including a first electrode layer; an insulating layer for inhibiting both types of carriers, a first type of carriers and a second type of carriers whose positive or negative characteristics are opposite to those of the first type of carriers, from passing through the layer; a

semiconductor layer; and an injection blocking layer for inhibiting one type of said carriers from being injected into the semiconductor layer,

the driving method having a refresh mode and a photoelectric conversion mode, wherein an electric field is applied so that one type of said carriers are remained in said semiconductor layer and the other type of said carriers are introduced to said second electrode layer in the refresh mode, and

said carriers stored in said semiconductor layer are detected in the photoelectric conversion mode.

35. A method according to claim 34, further comprising a capacitive storing element wherein integral values depending upon said carriers are stored and read out.

36. A method according to claim 34, further comprising a plurality of said photoelectric converting sections wherein the plurality of said photoelectric converting sections are electrically connected in each block and, when one of blocks is in the photoelectric conversion mode, at least one of the other blocks is turned to the refresh mode.

37. A method according to claim 34, wherein an electric field is applied to said photoelectric

converting elements in said refresh mode in accordance with a condition represented by ($V_{rG} \cdot q < V_D \cdot q - V_{FB} \cdot q$), where the product ($V_{rG} \cdot q$) of a voltage ($V_{rG}$) of said first electrode layer in said photoelectric converting section and an electric charge (q) of said first type of carriers becomes smaller than the product ($V_D \cdot q - V_{FB} \cdot q$) of a voltage ($V_D - V_{FB}$), the voltage subtracting a threshold voltage (V_{FB}) from a voltage (V_D) of said second electrode layer, and the electric charge (q) of said first type of carriers.

38. A method according to claim 35, wherein said capacitive element has two electrode layers, an insulating layer held between the electrode layers and a semiconductor layer to be operated in the accumulation state.